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APPLICATION NO	FILED DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
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22852	7590	06 05 2003		
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 1300 I STREET, NW WASHINGTON, DC 20005			EXAMINER	
			MAYO III, WILLIAM H	
			ART UNIT	PAPER NUMBER
			2831	

DATE MAILED: 06 05 2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/925,528	CAIMI, LUIGI
Examiner	Art Unit
William H. Mayo III	2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 14 April 2003.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 33-50 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 33-50 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

 If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 14

4) Interview Summary (PTO-413) Paper No(s) _____

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 14, 2003 has been entered.

Information Disclosure Statement

2. The information disclosure statement filed April 14, 2003 has been submitted for consideration by the Office. It has been placed in the application file and the information referred to therein has been considered.

Specification

3. The disclosure is objected to because of the following informalities: The specification has a few of misspelled words. The applicant should reread the specification and correct all misspelled words. An example of a misspelled word is "tipically" on page 10, line 26.

4. The specification also has a few run on sentences. The applicant should reread the specification and correct all the run on sentences. An example of a run on sentences appear on page 10, lines 11-19. The applicant should also delete the "," which appears after the period in line 19.

5. The use of the various trademarks have been noted in this application on page 14, 16, and 26. The applicant is reminded that they should be capitalized wherever they appear and they should be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claim 33 is rejected under 35 U.S.C. 102(e) as being anticipated by Hashimoto et al (Pat Num 5,561,185, herein referred to as Hashimoto). Hashimoto discloses an electrical conductor (Figs 1-3b) comprising a flame retardant resin composition (i.e.

coating layer, Col 1, lines 15-22) with the property of strippability so that it can be stripped from the electrical conductor (Col 1, lines 19-22). Specifically, with respect to claim 33, Hashimoto discloses an electrical conductor (1) comprising adding to a polymeric composition (as denoted by the number 1 in Col 3, lines 9-15) forming the coating layer (2), a predetermined amount of polyolefinic compound (i.e. polyethylene modified with an unsaturated carboxylic acid) which contains at least one unsaturation (i.e. polyethylene) and at least one carboxyl group (i.e. carboxylic acid) in the polymer chain, wherein the strippability is inherently controlled by the addition of the polyolefinic compound and wherein the electrical insulation properties of the coating layer (2) are made of a material capable of being constant after exposure to moisture.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 33-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto (Pat Num 5,561,185) in view of Hoshi et al (Pat Num 4,801,639, herein referred to as Hoshi). Hashimoto discloses an electrical conductor (Figs 1-3b) comprising a flame retardant resin composition (i.e. coating layer, Col 1, lines 15-22) with the property of strippability so that it can be stripped from the electrical conductor (Col 2, lines 40-43) as disclosed above with reference to claim 33. Specifically, with

respect to claim 34, Hashimoto discloses a method wherein the polyolefinic compound (i.e. polyethylene modified with an unsaturated carboxylic acid) which contains at least one unsaturation (i.e. polyethylene) and at least one carboxyl group (i.e. carboxylic acid) in the polymer chain, wherein the at least one carboxyl group is derived from a reaction of a carboxylated compound (i.e. maleic anhydride) with a unsaturated polyolefin (i.e. polyethylene) wherein the carboxylic compound (maleic anhydride) contains at least one carboxyl group (carboxyl acid, Col 4, lines 39-65). With respect to claim 40₃₄, Hashimoto discloses a method, wherein the said carboxylated compound (Col 4, lines 66-67) may be an anhydride (i.e. maleic anhydride) of an unsaturated carboxylic acid (Col 4, lines 59-65). With respect to claim 41₃₄, Hashimoto discloses a method, wherein the carboxylated compound may be maleic anhydride (Col 4, lines 66-67). With respect to claim 47, Hashimoto discloses that the ratio of the at least one carboxyl groups (carboxyl acid, Col 4, lines 39-65) to the at least one unsaturation (i.e. polyethylene) ranges from 1:10 to 1:100 in the polyolefinic compound (i.e. 1:100, Col 4, lines 47-51), wherein the polyolefinic compound (i.e. polyethylene modified with an unsaturated carboxylic acid) which contains at least one unsaturation (i.e. polyethylene) and at least one carboxyl group (i.e. carboxylic acid) in the polymer chain. With respect to claim 49, Hashimoto discloses that the polyolefinic compound (i.e. polyethylene modified with an unsaturated carboxylic acid), containing at least one unsaturation (i.e. polyethylene) and at least one carboxyl group (i.e. carboxylic acid) in the polymer chain, is present in the amount of less than 20% by weight to greater than 1% by weight of the polymeric composition (i.e. 1.5 to 20%, Col 3, lines 35-41). With respect to claim 50, Hashimoto

discloses that the polyolefinic compound (i.e. polyethylene modified with an unsaturated carboxylic acid), containing at least one unsaturation (i.e. polyethylene) and at least one carboxyl group (i.e. carboxylic acid) in the polymer chain, is present in the amount of less than 20% by weight to greater than 1% by weight of the polymeric composition (i.e. 1.5 to 20%, Col 3, lines 35-41).

However, Hashimoto doesn't necessarily disclose a method wherein the polyolefinic compound being derived from the polymerization of a diene or polyene monomer containing from 4 to 16 carbon atoms (claim 34), nor a method wherein the diene or polyene monomer being butadiene, pentadiene, hexadiene, hexatriene, heptadiene, heptatriene, oxtadiene, and mixtures thereof (claim 35), nor a method wherein the polymers having a polymerization number of 10 to 1000 (claim 36), nor the polymers having a polymerization number of 20 to 50 (claim 37), nor a method wherein the diene or polyene monomer being 1,3 butadiene, 1,3 pentadiene, 1,4 pentadiene, 1,3 hexadiene, 1,4 hexadiene, 1,5 hexadiene, or 2,4 hexadiene (claim 38), nor a method wherein the diene or polyene monomer being 1,3 butadiene (claim 39), nor a method wherein the carboxylated compound is an anhydride of an unsaturated carboxylic or unsaturated dicarboxylic acid (claim 40₃₅ & 38-39), nor a method wherein the carboxylated compound is maleic anhydride (claim 41₃₅ & 38-39), nor a method wherein the carboxylated compound is benzoic anhydride (claim 42₃₄₋₃₅ & 38-39), nor a method wherein the carboxylated compound is acetic anhydride (claim 43₃₄₋₃₅ & 38-39), nor the polyolefinic compound further having organo silane (claim 44), nor the silane being γ -methacryloxypropyltrimethoxysilane, methytriethoxysilane, methyltris (2-methoxyethoxy)

silane dimethyldioethoxysilane, vinyltris (2-methoxyethoxy)silane, vinyltrimethoxysilane, vinyltrimethoxysilane, octyltriethoxysilane, isobutyltriethoxysilane, and isobutyltrimethoxysilane, and mixtures thereof (claim 45), nor the silane being in the amount of between 0.05 percent to 1.5 percent by weight (claim 46), nor the ratio of the at least one carboxyl group to the at least one unsaturation being in the range of 1:10 to 1:50 (claim 48).

Hoshi teaches a flame retardant resin composition for usage with an electrical conductor or cable which generate no hazardous and corrosive gases of halogen type during burning due to fire outbreak (Col 1, lines 5-10) and is capable of preventing the deterioration and significant reduction in chemical resistance occurring of surfaces of the prior art resins (Col 2, lines 50-56). Specifically, with respect to claim 34, Hoshi teaches a method wherein a polyolefinic compound (Col 3, lines 10-23) is derived from the polymerization of a diene or polyene monomer (i.e. 1,3 butadiene), which contains from 4 carbon atoms (i.e. $\text{CH}_2=\text{HC}-\text{HC}=\text{CH}_2$) to form polybutadiene (Col 4, line 34). With respect to claim 35, Hoshi teaches a method wherein the diene or polyene monomer is polybutadiene, which contains 1,3 butadiene (Col 4, line 34). With respect to claim 36, Hoshi teaches a method wherein the polymer polybutadiene has a polymerization number of 10 to 1000 (i.e. about 100). With respect to claim 38, Hoshi teaches a method wherein the diene or polyene monomer is polybutadiene (Col 4, lines 33-34). With respect to claim 39, Hoshi teaches a method wherein the diene or polyene monomer is polybutadiene (Col 4, lines 33-34). With respect to claim 40_{35 & 38-39}, Hoshi teaches a method wherein the carboxylated compound is an anhydride of an

unsaturated dicarboxylic acid (Col 4, lines 25-35). With respect to claim 41_{35 & 38-39}, Hoshi teaches a method wherein the carboxylated compound may be maleic anhydride (Col 4, lines 25-40). With respect to claim 42_{34-35 & 38-39}, Hoshi teaches a method wherein the carboxylated compound may comprise benzoic anhydride (Col 4, lines 43-47). With respect to claim 43_{34-35 & 38-39}, Hoshi teaches a method wherein the carboxylated compound may comprise acetic anhydride (Col 4, lines 43-47). With respect to claim 44, Hoshi teaches that the polyolefinic compound further having organo silane (i.e. vinyltrimethoxysilane, Col 3, lines 35-40). With respect to claim 45, Hoshi teaches that the silane is vinyltrimethoxysilane (Col 3, lines 35-40). With respect to claim 46, Hoshi teaches that the silane being in the amount of 2 percent by weight (Col 3, lines 40-42). With respect to claim 48, Hoshi teaches that the ratio of the at least one carboxyl group (i.e. dicarboxylic acid) to the at least one unsaturation (i.e. 1,3 butadiene) is in the range of 1:10 to 1:50 (i.e. 1:10 to 3:10, Col 2, lines 57-65).

With respect to claims 35-36, 38-45, and 48, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the flame retardant composition of Hashimoto to comprise the carboxylated compound, such as polybutadiene modified by maleic, benzoic, or acetic anhydride as taught by Hoshi, because Hoshi teaches that such a carboxylated compound utilized in a conductor covering composition generates no hazardous and corrosive gases of halogen type during burning due to fire outbreak (Col 1, lines 5-10) and is capable of preventing the deterioration and significant reduction in chemical resistance occurring of surfaces of the prior art resins (Col 2, lines 50-56) and are known in the art (Col 2, lines 14-47) and

since it has been held to be within general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

With respect to claim 46, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the polymeric composition of modified Hashimoto to comprise silane in the range of 0.05 to 1.5 %, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Response to Arguments

10. Applicant's arguments filed November 25, 2002 have been fully considered but they are not persuasive. The applicant argues the following:

- A) There is no disclosure of how to make the product while controlling strippability and therefore Hashimoto cannot anticipate claim 33.
- B) The detailed description at column 4, lines 34-67 of the modified polyethylene of Hashimoto establishes that no unsaturation in the chain is provided by the modification.
- C) The double bond providing the unsaturation would no longer exist once the peroxide initiates the reaction and therefore the resultant product would not contain at least one unsaturation in the polymer chain.

D) The combination of Hashimoto and Hoshi is improper it has failed to satisfy at least the first and third requirements. Specifically, because there is no motivation to combine or modify the teaches of the Hashimoto to arrive at the applicant's invention, nor a suggestion by Hoshi of the desirability to obtain strippability of the coating, nor does there exist a reasonable expectation that the combination would produce a strippable coating.

With respect to argument A, the examiner respectfully traverses. Firstly, it is unclear how the applicant can state that there is no disclosure of how to make the product while controlling strippability. Clearly, Hashimoto discloses that the insulation of the wire "is good in workability of the covering layer at the end of the covered wire in the step of removing the covering layer" (Col 1, lines 15-21). So clearly, there exist a method of stripping. Secondly, Hashimoto clearly discloses the method of adding to a polymeric material adding to a polymeric composition (as denoted by the number 1 in Col 3, lines 9-15) forming the coating layer (2), a predetermined amount of polyolefinic compound (i.e. polyethylene modified with an unsaturated carboxylic acid) which contains at least one unsaturation (i.e. polyethylene) and at least one carboxyl group (i.e. carboxylic acid) in the polymer chain, as claimed. Therefore, Hashimoto clearly teaches how to make the insulating covering while inherently controlling strippability.

With respect to claim B & C, Hashimoto clearly teaches an unsaturation, which is polyethylene that it is modified with an unsaturated carboxylic acid or its derivative (Col 3, lines 35-41). It is unclear how the applicant can state that polyethylene doesn't

disclose an unsaturated position, when the applicant states that various polyethylene materials may be utilized as the material in the polymer matrix (see applicant's specification, Page 19, lines 21-22). The applicant maintains that butadiene is the only material responsible for the unsaturated position and therefore Hashimoto cannot anticipate the claim because it doesn't disclose butadiene. Even if the assertion of the applicant were hypothetically true, Hashimoto clearly teaches that the polymeric composition may comprise polymers of the diene compound such as butadiene (see Col 5, lines 42-48). Therefore, Hashimoto also teaches the material in which the applicant states is responsible for producing an unsaturated position. In light of the teachings of Hashimoto, the examiner respectfully submits that the rejection under 35 USC 102(b) is proper and just.

With respect to argument D, the examiner respectfully traverses. The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, clearly Hashimoto teaches a flame retardant composition which is utilized as an insulation covering for a conductor. Hoshi clearly teaches an alternative flame retardant composition which is also utilized as a conductor covering composition that generates no hazardous and corrosive gases of halogen type during burning due to fire outbreak (Col 1, lines 5-10) and is capable of

preventing the deterioration and significant reduction in chemical resistance occurring of surfaces of the prior art resins (Col 2, lines 50-56). Both flame retardant composition as taught by Hashimoto and Hoshi utilized common materials, however Hashimoto doesn't specifically disclose the specific ranges as claimed by the applicant. However, Hoshi discloses the exact composition materials and ranges as claimed by the applicant, which in addition to providing flame retardance, also provides additional properties as stated above. Therefore, there clearly exist a motivation for modifying the flame retardant composition of Hashimoto to comprise the carboxylated compound, such as polybutadiene modified by maleic, benzoic, or acetic anhydride as taught by Hoshi, because Hoshi teaches that such a carboxylated compound utilized in a conductor covering composition generates no hazardous and corrosive gases of halogen type during burning due to fire outbreak (Col 1, lines 5-10) and is capable of preventing the deterioration and significant reduction in chemical resistance occurring of surfaces of the prior art resins (Col 2, lines 50-56) and are known in the art (Col 2, lines 14-47). There also exist a reasonably amount of success for combining both references, since both compositions taught by Hashimoto and Hoshi may be utilized for the sole purpose of providing a conductor with flame retardant properties. The combination of the Hashimoto and Hoshi references discloses all of the claimed limitations and therefore the bounds for establishing a *prima facie* of obviousness are met. Secondly, even if the applicant argument is hypothetically truthful, the applicant discloses in the specification, that such a carboxylated compound utilizing polybutadiene modified by maleic, benzoic, or acetic anhydride are known in the art and commercially available (see Pages 14-15,

lines 8-26 & 1-26 respectively) for imparting flame resistant characteristics on a conductor. It has been held that utilizing well-known materials in the art, is a matter of design choice and therefore is not germane to patentability. Specifically, it has been held to be within general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416. Therefore, even if the applicant's argument were hypothetically correct, it is improper, as founded by the courts, to base patentability on the usage of materials which were commercially available to one of ordinary skill in the art and which has been admitted by the applicant as being well known materials in the art for providing a specific property.

The applicant states that Hoshi fails to teach the composition having the property of strippability as additional support for argument B. While the applicant is correct in stating that the Hoshi reference doesn't suggest the characteristic of strippability, clearly, the examiner has a different line of reasoning for combining the references as stated above. However, such a combination is not improper. Specifically, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). Hashimoto, the primary reference, clearly teaches a flame retardant material having strippability characteristics, however Hashimoto doesn't teach the polyolefinic compound being derived from the polymerization of a diene or polyene monomer containing from 4 to 16 carbon atoms and other configurations as denoted above with

respect to the rejection under 35 USC 103(a). The examiner has relied on the teachings of the Hoshi reference to provide a motivation for modifying Hashimoto with a known composition providing the same function which is to provide the conductor with flame retardant properties. Specifically, Hoshi teaches a flame retardant composition for usage as a conductor covering and comprising a carboxylated compound having polybutadiene modified by maleic, benzoic, or acetic anhydride, for the reasons stated above. Therefore, while Hoshi doesn't specifically state that the composition has the above stated property of strippability, the mere recitation of an additional advantage (i.e. strippability) associated with doing what the prior art suggests does not lend patentability to an otherwise unpatentable invention. *In re Lintner*, 458 F. 2d 1013, 173 USPQ 560 (CCPA 1972) and *In re Dillon*, 919 F.2d 688, 16 USPQ2d 1897 (Fed Cir 1990). In light of the above comments, the examiner respectfully submits that the combination of references is proper.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. It is Gustafsson et al (Pat Num 5,539,075), which discloses an unsaturated ethylene copolymer for insulating conductors in a cable.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (703)

306-9061. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (703) 308-3682. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



WHM III
May 31, 2003